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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,814	10/20/2003	William C. Cox	03549.0088-01	2634

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EXAMINER

RUDDOCK, ULA CORINNA

ART UNIT PAPER NUMBER

1771

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,814	<b>Applicant(s)</b> COX ET AL. <span style="float: right;">9</span>	
	<b>Examiner</b> Ula C Ruddock	<b>Art Unit</b> 1771	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,6-14,16 and 24-33 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-14,16 and 24-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/20/03</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 6-14, 16, 24-33 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-1-12 of U.S. Patent No. 6,713,411.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are obvious variants over one another.

### *Claim Rejections - 35 USC § 102/103*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter

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as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 6-14, 16, and 24-32 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chen (US 3,900,625). Chen discloses a composite laminate noninterwoven fabric made of synthetic fibers (col 2, ln 48-50 and 57-61). As shown in Example 2, the composite comprises a 3 mil (.003 inches) polyethylene film, a 3 mil (.003 inches) polyvinyl chloride film, an adhesive material comprising chlorinated paraffin wax and 3% antimony oxide, and two non-woven nylon fiber grid layers (col 6, ln 1-12). The chlorinated paraffin can be added in an amount of 5% (col 7, ln 7-8). With regard to claim 16, it has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitations. *Ex parte Masham*, 2 UPQ2d 1647 (1987). Therefore, the term "protective garment" has not been given any patentable weight.

Although Chen does not explicitly teach that the laminate passes NFPA 701-1989, has at least 12.0 lbs of grab tensile according to INDA IST 110.3-92, and has a Suter hydrostatic head of at least 50 cm, it is reasonable to presume that these properties are inherent to the composite of Chen. Support for said presumption is found in the use of like materials (i.e. PVC film, polyethylene film, synthetic nonwoven fabric, adhesive, antimony oxide and chlorinated paraffin fire retardants). The burden is upon Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In addition, the presently claimed properties of NFPA 701-1989, 12.0 lbs of grab tensile according to INDA IST 110.3-92, and Suter hydrostatic head of at least 50 cm would obviously have been

present once the Chen product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

With regard to claim 28 and 30, Chen fails to disclose that the nonwoven fabric has a weight ranging from 1-4 ounces per square yard and that the polymeric film has a weight ranging from 0.05 to 10 ounces per square yard. It should be noted that the basis weight of the fabric and film is a result effective variable. The greater the weight of the fabric directly affects the strength of the fabric and the greater the weight of the film directly affects the flame retardance of the composite. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the fabric have a weight ranging from 1-4 ounces per square yard and the polymeric film have a weight ranging from 0.05 to 10 ounces per square yard, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have optimized the basis weight of the fabric and film, motivated by the desire to create a composite that has high strength, tear resistance, and increased flame retardant properties.

6. Claims 1, 6-14, 16, 24-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (US 5,491,022) in view of Dunham et al. (US 6,265,082). Smith teaches a fire and chemical resistant fabric with comprises at least one laminate formed by coextruding a pair of polymeric sheets with an intermediate layer of a hydrophilic polymer which is adhered to a fabric scrim, comprising a blend of polyester and cellulosic fibers, the fabric scrim containing an effective amount of a fire resistant agent (abstract). The coextruded sheets are adhered to the scrim fabric

by use of an adhesive or by fusion bonding (col 3, ln 1-4). The sheets can be polymeric materials such as polyethylene (col 3, ln 5-9). The coextruded sheets which form the laminate are of a thickness of about 0.5 to 3 mils each (col 3, ln 9-11). The fabric scrim can be woven or nonwoven. The nonwoven fabrics comprise about 30 to 50% by weight of polyester and about 70 to 50% by weight of cellulosic fibers. The cellulosic fibers can be wood fibers (col 3, ln 17-25). The preferred fabric can have a thickness of about 1/8 to 1/4 inch or 125 mil-250 mil (col 3, ln 29). A halogen-containing organic flame retarder and an auxiliary flame-retarding agent may also be added to provide the outer film with improved resistance to burning. Specific examples of the organic flame retarder include chlorinated paraffins and tetrabromobisphenol-A (col 4, ln 25-40). The auxiliary flame-retarding agents include antimony trioxide, zinc borate, and sodium antimonate (col 4, ln 41-45). The amount of the halogen-containing organic flame retarder added to the resin composition ranges from 2 to 35 wt% (col 4, ln 46-49). The added amount of the auxiliary flame-retarding agent may be within .4 to 21 wt% (col 4, ln 50-52). The fabrics are used in the preparation of light weight protective garments (col 1, ln 3-5). Furthermore, Smith discloses an intermediate layer that is preferably a polymer material such as ethylene vinyl alcohol (col 3, ln 12-16). Smith et al. disclose the claimed invention except for the teaching that the polymeric film is polyvinyl chloride.

Dunham et al. (US 6,265,082) disclose a fire retardant composition having a film (abstract). A suitable underlying polymer resin which may be flammable or nonflammable. Inherently nonflammable resins include polyvinyl chloride (col 5, ln 23-26). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used the polyvinyl

chloride resin layer of Dunham et al. in place of one of the polymeric sheets of Smith motivated by the desire to obtain a more flame resistant fabric.

Although Smith and Dunham et al. do not explicitly teach that the laminate passes NFPA 701-1989, has at least 12.0 lbs of grab tensile according to INDA IST 110.3-92, and has a Suter hydrostatic head of at least 50 cm, it is reasonable to presume that these properties are inherent to the composite of Smith and Dunham et al.. Support for said presumption is found in the use of like materials (i.e. PVC film, polyethylene film, synthetic nonwoven fabric, adhesive, antimony oxide and chlorinated paraffin fire retardants). The burden is upon Applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 594. In addition, the presently claimed properties of NFPA 701-1989, 12.0 lbs of grab tensile according to INDA IST 110.3-92, and Suter hydrostatic head of at least 50 cm would obviously have been present once the Smith and Dunham et al. product is provided. Note *In re Best*, 195 USPQ at 433, footnote 4 (CCPA 1977).

With regard to claims 28 and 30, it should be noted that increasing the basis weight of the fabric and film are result effective variables. For example, the higher the basis weight of the fabric and the film directly affects the strength and durability of the laminate. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a nonwoven fabric having a weight ranging from 1.0-4.0 ounces per square yard and a halogenated polymer film having a weight ranging from 0.05 to 10.0 ounces per square yard, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). In the present

invention, one would have optimized the basis weight of the fabric and the film, motivated by the desire to obtain a laminate having durability and strength.

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ula C Ruddock whose telephone number is 571-272-1481. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

UCR *UCR*

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